

susceptible varieties. Canning and freezing tests have shown that from the standpoint of color, texture, flavor, and tenderness it is very satisfactory and comparable with present small green-seeded varieties.

#### Downy Mildew-Resistant Fordhook Limas

R. E. Wester

Three green-seeded downy mildew Fordhooks (156, 1556, and 1656) will be tested extensively in the downy mildew areas this year. During the past season (1957) which was unusually hot and dry, they showed less heat resistance than Fordhook 242, but they will set a good crop of pods during the cool weather of late summer and mature their crop of pods during the downy mildew season. These lines resulted from five backcrosses to Fordhook 242.

Approximately 40 F<sub>2</sub> downy mildew-resistant Fordhooks from six backcrosses to Fordhook 242 are now growing in the greenhouse. There are white and green-seeded types in these families.

Although it has been more difficult to develop a high yielding heat-resistant downy mildew-resistant Fordhook than the bay types, definite progress is being made.

#### Preserving the Downy Mildew Organism (*Phytophthora phaseoli*)

R. E. Wester

In the past it has been very difficult to maintain the downy mildew organism in pure culture on various kinds of media. This problem has been taken care of by the following simple freezing method. Inoculate lima bean seedlings with downy mildew, place in a humidity chamber with temperatures ranging between 65° and 75° F. Within 5 days, the seedlings are thoroughly covered with Sporulating mycelium of the downy mildew organism. Infected seedlings are then cut into short pieces, placed in a 2-1/2 oz. screw-top bottle and placed in a refrigerator at -10° C. When required for use, these infected seedlings are placed in a small flask of water and shaken thoroughly. This shakes the conidiophores loose from the mycelium into the water. These conidiophores suspended in water are placed in an atomizer and are then ready for inoculating purposes.